

Listing of Claims:

1. (Currently Amended) A communication method performed by a WWAN network system for a mobile terminal with a WWAN address in the WWAN to bilaterally switch communication between the WWAN and a WLAN via a mobility supporting module suitable to use with a mobility control module, the method comprising:

receiving a registration report sent by the mobile terminal when the mobile terminal enters the WLAN, wherein the registration report at least contains a WLAN address that the mobile terminal acquires when entering the WLAN; and

establishing a mapping relationship between the WWAN address and the WLAN address of the mobile terminal;

wherein the mobility supporting module enables a switch between the WWAN and WLAN, dynamically updates the mapping relationship between the WWAN and WLAN based on when the mobile terminal enters or exits the WLAN, and enables the exchange of registration and/or cancelation reports between the WWAN and WLAN, either on a periodic or continuous basis, by providing updated WWAN and WLAN address information via one or more encapsulating techniques; and

wherein the mobile terminal has (i) an invariable address in WWAN and (ii) a different WLAN address with each entry into a different WLAN.

2. (Previously Presented) The method according to claim 1, further comprising:
receiving the data information to be sent to said mobile terminal from a source address;

encapsulating said WLAN address into the data information to be sent to said mobile terminal, according to the mapping relationship between said WWAN address and said WLAN address; and

sending the data information containing said WLAN address to said mobile terminal via said WLAN.

3. (Previously Presented) The method according to claim 1, further comprising:

receiving the data information containing said WLAN address sent by said mobile terminal to a destination address via said WLAN; and

unpacking the data information containing said WLAN address and sending the unpacked data information to the destination address.

4. (Previously Presented) The method according to claim 3, further comprising:

receiving a report for canceling registration sent by said mobile terminal when said mobile terminal leaves said WLAN; and

deleting the mapping relationship between said WWAN address and said WLAN address of said mobile terminal in the network system according to said report for canceling registration.

5. (Previously Presented) The method according to claim 3, further comprising:

receiving a registration report sent by said mobile terminal when said mobile terminal enters another WLAN, wherein the registration report at least contains another

WLAN address said mobile terminal acquires when said mobile terminal enters the another WLAN.

6. (Previously Presented) The method according to claim 4, wherein said registration report and said report for canceling registration can be transferred to the network system via either a WWAN link or a WLAN link.

7. (Currently Amended) A communication method performed by a mobile terminal with a WWAN address, for the mobile terminal to bilaterally switch communication between a WWAN and a WLAN via a mobility supporting module suitable to use with a mobility control module, the method comprising:

acquiring a WLAN address when entering the WLAN; and

sending a registration report to the WWAN network system, wherein the registration report at least contains the WLAN address;

wherein the WWAN network system establishes a mapping relationship between the WWAN address and the WLAN address of the mobile terminal according to the registration report; ~~and~~

wherein the mobility supporting module enables a switch between the WWAN and WLAN, dynamically updates the mapping relationship between the WWAN and WLAN based on when the mobile terminal enters or exits the WLAN, and enables the exchange of registration and/or cancelation reports between the WWAN and WLAN, either on a periodic or continuous basis, by providing updated WWAN and WLAN address information via one or more encapsulating techniques; and

wherein the mobile terminal has (i) an invariable address in WWAN and (ii) a different WLAN address with each entry into a different WLAN.

8. (Previously Presented) The method according to claim 7, further comprising:
sending a report for canceling registration to said WWAN network system so as to notify said WWAN network system that said WLAN address of the mobile terminal is invalid when the mobile terminal leaves said WLAN.

9. (Previously Presented) The method according to claim 8, wherein said registration report and said report for canceling registration can be transferred to said network system via one of WWAN link and WLAN link.

10. (Previously Presented) The method according to claim 9, further comprising:
receiving the data information containing said WLAN address transferred via said WWAN network system from a source address, wherein said WLAN address is encapsulated in the data information by said WWAN network system; and
unpacking the received data information so as to get the data information from the source address.

11. (Previously Presented) The method according to claim 10, further comprising:
encapsulating said WLAN address into the data information to be sent to a destination address; and

sending the data information containing said WLAN address to said WWAN network system, so as to send the data information unpacked by said WWAN network system to the destination address.

12. (Currently Amended) A WWAN network system, which enables a mobile terminal with a WWAN address in the WWAN to bilaterally switch communication between the WWAN and a WLAN via a mobility supporting module suitable to use with a mobility control module, the system comprising:

a receiving unit, for receiving a registration report from the mobile terminal when the mobile terminal enters the WLAN, wherein the registration report at least contains a WLAN address that the mobile terminal acquires when the mobile terminal enters the WLAN; and

an establishing unit, for establishing a mapping relationship between the WWAN address and the WLAN address of the mobile terminal according to the registration report;

wherein the mobility supporting module enables a switch between the WWAN and WLAN, dynamically updates the mapping relationship between the WWAN and WLAN based on when the mobile terminal enters or exits the WLAN, and enables the exchange of registration and/or cancelation reports between the WWAN and WLAN, either on a periodic or continuous basis, by providing updated WWAN and WLAN address information via one or more encapsulating techniques; and

wherein the mobile terminal has (i) an invariable address in WWAN and (ii) a different WLAN address with each entry into a different WLAN.

13. (Previously Presented) The WWAN network system according to claim 12, further comprising:

an encapsulating unit, for encapsulating said WLAN address into the data information to be sent to said mobile terminal according to the mapping relationship between said WWAN address and said WLAN address when receiving the data information from a source address to be sent to said mobile terminal; and

a sending unit, for sending the data information containing said WLAN address to said mobile terminal via said WLAN.

14. (Previously Presented) The WWAN network system according to claim 12, further comprising:

a unpacking unit, for when receiving the data information containing said WLAN address sent to a destination address by said mobile terminal via said WLAN, unpacking the data information containing said WLAN address and sending the unpacked data information to the destination address.

15. (Previously Presented) The WWAN network system according to claim 14, further comprising:

a deleting unit, for when receiving a report for canceling registration sent by said mobile terminal when said mobile terminal leaves said WLAN, deleting the mapping relationship between said WWAN address and said WLAN address of said mobile terminal in the network system according to the report for canceling registration.

16. (Previously Presented) The WWAN network system according to claim 15, further comprising:

an updating unit, for when receiving a registration report sent by said mobile terminal as said mobile terminal enters another WLAN, updating the mapping relationship between said WWAN address and said WLAN address of said mobile terminal to the mapping relationship between said WWAN address and the another WLAN address according to the registration report, wherein the registration report at least contains the another WLAN address that said mobile terminal acquires when said mobile terminal enters the another WLAN.

17. (Currently Amended) A mobile terminal with a WWAN address in a WWAN, capable of bilaterally switching communication between the WWAN and a WLAN via a mobility supporting module suitable to use with a mobility control module, the mobile terminal, the mobile terminal comprising:

a receiving unit, for receiving a WLAN address when the mobile terminal enters the WLAN; and

a sending unit, for sending a registration report to the WWAN network system, wherein the registration report at least contains the WLAN address;

wherein the WWAN network system establishes a mapping relationship between the WWAN address and the WLAN address of the mobile terminal according to the registration report; and

wherein the mobility supporting module enables a switch between the WWAN and WLAN, dynamically updates the mapping relationship between the WWAN and

WLAN based on when the mobile terminal enters or exits the WLAN, and enables the exchange of registration and/or cancelation reports between the WWAN and WLAN, either on a periodic or continuous basis, by providing updated WWAN and WLAN address information via one or more encapsulating techniques; and

wherein the mobile terminal has (i) an invariable address in WWAN and (ii) a different WLAN address with each entry into a different WLAN.

18. (Previously Presented) The mobile terminal according to claim 17, wherein:
said sending unit sends a report for canceling registration to said WWAN network system to notify said WWAN network system that said WLAN address of the mobile terminal is invalid when the mobile terminal leaves said WLAN.

19. (Previously Presented) The mobile terminal according to claim 18, wherein:
said receiving unit receives the data information containing said WLAN address transferred via said WWAN network system from a source address, wherein said WLAN address is encapsulated in the data information by said WWAN network system;
a unpacking unit unpacks the received data information to get the data information from the source address.

20. (Previously Presented) The mobile terminal according to claim 19, further comprising:

an encapsulating unit, for encapsulating said WLAN address into the data information to be sent to a destination address;

said sending unit sends the data information containing said WLAN address to said WWAN network system, so as to send the data information unpacked by said WWAN network system to the destination address.